

524, 037

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



Rec'd PCT/PTO

15 MAR 2005



(43) International Publication Date  
11 March 2004 (11.03.2004)

PCT

(10) International Publication Number  
**WO 2004/020334 A1**

(51) International Patent Classification<sup>7</sup>: **C01B 33/18**

(21) International Application Number:  
PCT/EP2003/008332

(22) International Filing Date: 29 July 2003 (29.07.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
102 39 144.0 27 August 2002 (27.08.2002) DE

(71) Applicant (for all designated States except US): DE-  
GUSSA AG [DE/DE]; Bennigsenplatz 1, 40474 Düssel-  
dorf (DE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): SCHUMACHER,

Kai [DE/DE]; Berliner Strasse 16, 65719 Hofheim (DE).  
OSWALD, Monika [DE/DE]; Burgallee 6c, 63454 Hanau  
(DE).

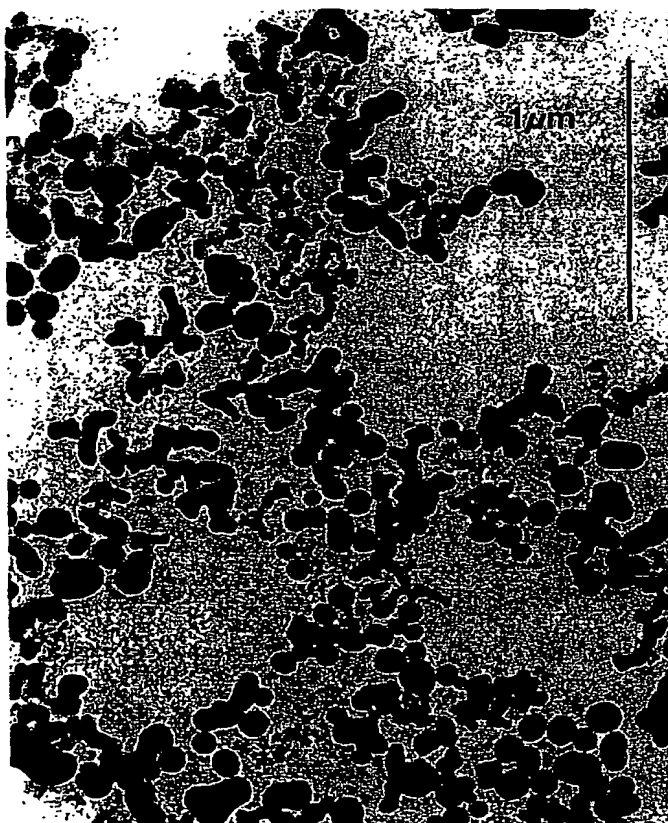
(74) Common Representative: DEGUSSA AG; Intellectual  
Property Management, PATENTE und MARKEN, Stan-  
dort Hanau, Postfach 13 45, 63403 Hanau (DE).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,  
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,  
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,  
MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC,  
SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA,  
UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): Eurasian patent (AM, AZ,  
BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE,  
BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU,  
IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR).

[Continued on next page]

(54) Title: SILICON DIOXIDE DISPERSION



(57) **Abstract:** Stable, aqueous dispersion contain-  
ing silicon dioxide powder having a hydroxyl group  
density of 2.5 to 4.7 OH/nm<sup>2</sup>, which is obtained from  
a silicon dioxide powder produced by a flame hydrol-  
ysis process under acid conditions. The dispersion is  
produced by incorporating the silicon dioxide pow-  
der into an aqueous solution by means of a dispersing  
device. The dispersion can be used to produce glass  
articles.

WO 2004/020334 A1

BEST AVAILABLE COPY